

CLAIM LISTING

1. (Currently Amended) A method of distributing satellite navigation data, comprising:

processing satellite signals at each of a plurality of reference stations to receive a respective plurality of satellite navigation data streams, wherein each of the satellite navigation data streams comprise a plurality of subframes carrying different portions of ephemeris data, and another plurality of subframes carrying different portions of an almanac;

forming packets in response to said plurality of satellite navigation data streams to generate a plurality of packetized satellite navigation data streams, wherein each one of the plurality of subframes carrying different portions of ephemeris data, and each one of the plurality of subframes carrying different portions of the almanac from one of the plurality of satellite navigation streams are placed in different packets;

sending each of said plurality of packetized satellite navigation data streams to a processing system;

removing, at said processing system, duplicate packets within said plurality of packetized satellite navigation data streams to generate a combined packet stream;

~~decoding satellite navigation data within said combined packet stream to generate at least one of ephemeris data, almanac data, ionosphere data, universal time offset data,~~

~~satellite health data, and raw data bits, wherein said decoding occurs after removing duplicate packets; and~~
sending said combined packet stream into a communication network.

2-3. (Cancelled)

4. (Currently Amended) The method of claim 1, wherein said plurality of satellite navigation data streams comprises global positioning system (GPS) satellite navigation messages, ~~and wherein each of said packets includes a subframe of said GPS satellite navigation messages.~~

5. (Original) The method of claim 4, wherein each of said packets includes a header having a satellite identifier and a time-of-week (TOW) value.

6. (Original) The method of claim 5, wherein each of said duplicate packets is removed in response to said satellite identifier and said TOW value associated therewith.

7. (Original) The method of claim 1, wherein said processing system comprises a hub, and the method further comprises:

receiving said combined packet stream from said communication network at a position location server.

8. (Original) The method of claim 7, further comprising:

decoding satellite navigation data within said combined packet stream to generate satellite data;
and storing said satellite data in a cache disposed within said position location server.

9. (Original) The method of claim 7, further comprising:
receiving, at said position location server, at least one additional packetized satellite navigation data stream;
removing duplicate packets within said combined packet stream and said at least one additional packetized satellite navigation data stream to generate another combined packet stream;
decoding satellite navigation data within said other combined packet stream to generate satellite data; and
storing said satellite data in a cache disposed within said position location server.

10. (Original) The method of claim 9, wherein said at least one additional packetized satellite navigation data stream is generated by at least one of an additional hub and a reference station disposed proximate to said position location server.

11. (Currently Amended) A system for distributing satellite navigation data, comprising:

a plurality of reference stations for processing satellite signals to receive a respective plurality of satellite navigation data streams, wherein each of the satellite

navigation data streams comprise a plurality of subframes carrying different portions of ephemeris data, and another plurality of subframes carrying different portions of an almanac and forming packets in response to said plurality of satellite navigation data streams to generate a plurality of packetized satellite navigation data streams, wherein each one of the plurality of subframes carrying different portions of ephemeris data, and each one of the plurality of subframes carrying different portions of the almanac from one of the plurality of satellite navigation streams are placed in different packets; and

a processing system for receiving each of said plurality of packetized satellite navigation data streams, removing duplicate packets within said plurality of packetized satellite navigation data streams to generate a combined packet stream, ~~decoding satellite navigation data within said combined packet stream to generate at least one of ephemeris data, almanac data, ionosphere data, universal time offset data, satellite health data, and raw data bits,~~ and sending said combined packet stream into a communication network.

12-13. (Cancelled).

14. (Original) The system of claim 11, wherein said plurality of satellite navigation data streams comprises global positioning system (GPS) satellite navigation messages, and wherein each of said packets includes a subframe of said GPS satellite navigation messages.

15. (Original) The system of claim 14, wherein each of said packets includes a header having a satellite identifier and a time-of-week (TOW) value.

16. (Original) The system of claim 15, wherein each of said duplicate packets is removed in response to said satellite identifier and said TOW value associated therewith.

17. (Original) The system of claim 11, wherein said processing system comprises a hub, and the system further comprises:

a position location server for receiving said combined packet stream.

18. (Original) The system of claim 17, wherein said position location server comprises:

a processor for decoding satellite navigation data within said combined packet stream to generate satellite data, and a memory for storing said satellite data.

19. (Original) The system of claim 17, further comprising:

an additional reference station disposed proximate to said position location server for providing at least one additional packetized satellite navigation data stream;

wherein said position location server comprises:

a processor for removing duplicate packets within said combined packet stream and said at least one additional packetized satellite navigation data stream to generate another combined packet stream and decoding satellite

navigation data within said other combined packet stream to generate satellite data; and

a memory for storing said satellite data.

20. (Currently Amended) An apparatus for distributing satellite navigation data, comprising:

means for processing satellite signals at each of a plurality of reference stations to receive a respective plurality of satellite navigation data streams, wherein each of the satellite navigation data streams comprise a plurality of subframes carrying different portions of ephemeris data, and another plurality of subframes carrying different portions of an almanac;

means for forming packets in response to said plurality of satellite navigation data streams to generate a plurality of packetized satellite navigation data streams, wherein each one of the plurality of subframes carrying different portions of ephemeris data, and each one of the plurality of subframes carrying different portions of the almanac from one of the plurality of satellite navigation streams are placed in different packets;

means for sending each of said plurality of packetized satellite navigation data streams to a processing system;

means for removing, at said processing system, duplicate packets within said plurality of packetized satellite navigation data streams to generate a combined packet stream;

~~means for decoding satellite navigation data within said combined packet stream to generate ephemeris data after removing duplicate packets; and~~

means for sending said combined packet stream into a communication network.

21. (New) The method of claim 1, wherein removing further comprises removing some of the packets if some of the packets carrying some of the plurality of subframes carrying different portions of the ephemeris data or the another plurality of subframes carrying different portions of the almanac from the one of the plurality of satellite navigation streams are duplicate and retaining remaining packets carrying a remainder of the plurality of subframes carrying different portions of the ephemeris data or the another plurality of subframes carrying different portions of the almanac data from the one of the plurality of satellite navigation streams.

22. (New) The method of claim 1, wherein removing further comprises removing a duplicate packet carrying the different portion of the almanac.

23. (New) The method of claim 1, further comprising:

decoding satellite navigation data within said combined packet stream to generate satellite data.

24. (New) The method of claim 23, wherein said satellite data comprises at least one of ephemeris data, almanac data, ionosphere data, universal time offset data, satellite health data, and raw data bits.

25. (New) The method of claim 1, wherein each subframe carries no more than 300 bits.

26. (New) The method of claim 1, wherein removing further comprises removing a duplicate packet carrying the different portion of the ephemeris data, while retaining the rest of the plurality of packets that carry the different portions of the ephemeris data for the one of the satellite navigation data streams.

26. (New) The system of claim 11, wherein said processing system includes a processor for decoding satellite navigation data within said combined packet stream to generate satellite data.

27. (New) The system of claim 12, wherein said satellite data comprises at least one of ephemeris data, almanac data, ionosphere data, universal time offset data, satellite health data, and raw data bits.